

Exam.Code:0001

Sub. Code: 0084

2012

B.A./B.Sc. (General) First Semester
Industrial Microbiology
IMB-101: Fundamentals of Microbiology-I

Time allowed: 3 Hours

Max. Marks: 33

NOTE: Attempt five questions in all, including Question No. I which is compulsory and selecting one question from each Unit.

x-x-x

I. Attempt the following:-

- a) What is spontaneous generation?
- b) Name two endospore forming bacteria.
- c) Define pure culture of bacteria.
- d) What are the advantages of phase contrast microscopy?
- e) Why staining is necessary of study microorganisms.
- f) What is plasmolysis?

(6x1½)

UNIT – I

- II. a) Describe the contribution of Alexander Fleming and Edward Jenner in the field of microbiology.
- b) Differentiate between Archaea and Bacteria domains.

(2x3)

III. Differentiate between:-

- a) Bright field and Dark field microscopy
- b) TEM and SEM

(2x3)

UNIT – II

- IV. a) Briefly explain the monauxic growth curve. Highlight the factors responsible for onset of each phase.
- b) What is synchronous growth?

(4,2)

- V. Describe the structure of bacterial endospores. Why are they so resistant and how are they different from a vegetative cell?

(6)

UNIT – III

VI. Write note on:-

- a) Antimicrobial activity of Aldehydes and Halogens.
- b) Describe any one method of sterilize Vitamins, antibiotics and animal serum.

P.T.O.

(2)

- VII. a) What is pasteurization? Explain commercial pasteurization of Milk.
b) Enumerate the conditions which affect the death of micro-organisms when they are exposed to an anti microbial agents? (2x3)

UNIT – IV

- VIII. a) Briefly explain the electron transport chain of bacteria.
b) Write note on Calvin cycle. (2x3)
- IX. Differentiate between:-
a) Osmosis and Plasmolysis
b) Passive and active transport (2x3)

x-x-x